



PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor of: T. KNIGHT *ET AL.*

Serial No.: 08/082,328

Group Art Unit: 2103

Filed: June 24, 1993

Examiner: Y. Whang

For: METHOD AND APPARATUS
FOR NON-CONDUCTIVELY
INTERCONNECTING
INTEGRATED CIRCUITS

Attorney Docket No.: 7828-003

RESPONSE TO RESTRICTION REQUIREMENTHonorable Commissioner of Patents and Trademarks
Washington, D.C. 20231FEB 02 1996
GROUP 2100

Sir:

Applicants elect to prosecute, with traverse, the species of paragraph 1(a), namely, "Figures 1, 7, 15 drawn to a modular electronic system referred to [in] claims 1-12, 13, 18, 22, 28, 60, 68, 102-103, 107, 139-142, 144, 148."

Applicants traverse the way the Examiner has specified the species in paragraph 1 as follows:

c) The embodiment of subparagraph (c) (Figure 3) is not distinct from that of subparagraph (a). Page 26, line 20 of the specification indicates that die 11 of Fig. 1 includes conductive contacts 16 for powering device 12. At lines 26-28 and with reference to Fig. 1, the specification indicates that power could be provided "by means of a metallic fuzz button." Fig. 3 shows a modular electronic system including metallic fuzz buttons 41, 42, 43 that contact conductive contact pads 45, 46, 47. The discussion of Fig. 3 also indicates at page 33, lines 30-34 several alternatives for these conductive means.

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e) The embodiment of subparagraph (e) is clearly not a waveform. As indicated in the specification at page 36, line 21, it is an MCM similar to that of Fig. 4.

f) The diagrams of Fig. 6 are not an embodiment at all but waveforms illustrative of signals coupled between dies 11 and 85 of Fig. 5 as stated at page 41, line 32.

g and h) The embodiments of subparagraphs g and h (Figs. 8, 9 and 10) are not distinct from those of subparagraph (a). The embodiments of Figs. 8, 9 and 10 are simply more complicated structures extending the same principles set forth in the embodiment of Fig. 1. See, for example, the discussion of Fig. 1 at page 26, lines 4-9 and page 32, lines 15-25.

i) Figs. 11A, 11B, 12A, 12B explain an advantage of the present invention (its ability to compensate for misalignment) and are not the description of a separate embodiment.

j) Fig. 13 is not described in the specification as illustrating a superconducting structure. Rather it is a multi-level structure to which the comments on subparagraphs (g) and (h) are applicable. Fig. 14 does illustrate a superconducting device. However, Fig. 14 is not distinct from the embodiment of subparagraph (a) which contemplates at page 27, line 11, the use of a superconducting substrate.

l) The method claims in the present application have been canceled.

n) The embodiments of subparagraph (n) (Figs. 20A-B) are not distinct from those of subparagraph (a). The embodiments of subparagraph (n) are application specific modules. Module 277a of Fig. 15 which is part of the species of subparagraph (a) is identified at page 54, line 31 as being a custom ASIC (application specific integrated circuit) die.

r and s) The method claims have been canceled from the present application.


Applicants are unable to reconcile apparent inconsistencies in the Examiner's determination of species. For example, claim 9 is associated with both the species of subparagraph (a) and that of subparagraph (c). Claims 10, 11 and 12, which are dependent on claim 9 are associated with the species of subparagraph (a) but not that of subparagraph (c). Dependent claim 4 which is drawn to an ASIC is associated with the species of subparagraph (a) but not that of subparagraph (n) which also is an ASIC. Further, it is not understood why some of the claims (*e.g.*, claims 5, 6, and 7) are deemed to be readable on the species of subparagraph (a) while numerous others are not.

Applicants also traverse the Examiner's statement in paragraph 2 that there are no generic claims in the application. For example, claim 1 reads on not only the embodiments of Figs. 1, 7 and 15 but also on those of at least Figs. 3, 4, 5, 14, 20B and 22. Claims 28 and 102 read on all the embodiments in which capacitive coupling is employed.

In response to the requirement to list all claims readable on the elected species (subparagraph (a)) (Figs. 1, 7 and 15), applicants submit that at least the following claims are readable thereon in view of the broad teaching in the specification of the interchangeability of various features of the invention among the various embodiments disclosed and the lack of distinction among certain alleged species as described above: Claims 1-13, 15-25, 28, 36-68, 70-79, 102-111, 113-129, 136-158, ~~161-196~~, and 199-200.

Respectfully submitted,

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